CODE SNIPPETS FOR SEMATIC HTML STRUCTURE

1. Skip-Link Implementation

Location: All HTML files (index.html, about.html, consult.html, contact.html)

```html
<!-- Skip Link for Accessibility -->
<a href="#main-content" class="skip-link">Skip to main content</a>
```

Purpose: Allows keyboard users to bypass repetitive navigation and jump directly to main content.

2. Complete Semantic Page Structure

Location: All HTML files

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Solar Consult | Your Trusted Partner</title>
</head>
<body>
    <!-- Skip Link for Accessibility -->
    <a href="#main-content" class="skip-link">Skip to main content</a>

    <header>
        <h1>Solar Consult</h1>
        <p>Your Trusted Partner in Solar Energy Solutions</p>
    </header>

    <nav aria-label="Main navigation">
        <ul>
            <li><a href="index.html">Home</a></li>
            <li><a href="about.html">About</a></li>
            <li><a href="contact.html">Contact</a></li>
            <li><a href="consult.html">Consult</a></li>
```

```
      </ul>
    </nav>

    <main id="main-content">
      <!-- Main content sections -->
    </main>

    <footer>
      <p>&copy; 2025 Solar Consult. All rights reserved.</p>
      <nav aria-label="Footer navigation">
        <ul>
          <li><a href="index.html">Home</a></li>
          <li><a href="about.html">About</a></li>
          <li><a href="contact.html">Contact</a></li>
          <li><a href="consult.html">Consult</a></li>
        </ul>
      </nav>
    </footer>
</body>
</html>
```

Elements demonstrated:

- `<header>`: Site header

- `<nav>`: Navigation with ARIA label

- `<main>`: Main content area with id for skip-link targeting

- `<footer>`: Footer with navigation

3. Section, Article, and Aside Structure

Location: index.html, about.html

```html
<main id="main-content">
  <section aria-labelledby="welcome-heading">
    <h2 id="welcome-heading">Welcome to Solar Consult</h2>
    <p>Your trusted partner in solar energy solutions...</p>
  </section>

  <article aria-labelledby="services-heading">
```

```
      <h2 id="services-heading">Our Services</h2>
      <p>We offer comprehensive solar energy consulting services...</p>


      <section aria-labelledby="solar-benefits-heading">
        <h3 id="solar-benefits-heading">Benefits of Solar Energy</h3>
        <ul>
          <li>Reduce your carbon footprint</li>
          <li>Lower electricity bills</li>
          <li>Increase property value</li>
          <li>Support renewable energy initiatives</li>
        </ul>
      </section>
    </article>


    <aside aria-labelledby="sidebar-heading">
      <h2 id="sidebar-heading">Quick Facts</h2>
      <p>Solar energy is one of the fastest-growing renewable energy sources worldwide.</p>
    </aside>
</main>
```


Elements demonstrated:
- `<section>`: Thematic grouping of content
- `<article>`: Independent, self-contained content
- `<aside>`: Complementary content
- `aria-labelledby`: Links headings to sections for screen readers

4. HTML5 Figure and Figcaption

Location: index.html, about.html


```html
<figure>
  <img src="../Diagrams/wireframe_v1.png"
    alt="Wireframe diagram showing the initial design layout of our solar consultation website with navigation structure and content sections"
    width="600" height="400">
  <figcaption>Initial wireframe design of our solar consultation platform, showcasing our commitment to user-friendly interface design.</figcaption>
</figure>
```

```

Elements demonstrated:

- `<figure>`: Self-contained content with caption
- `<figcaption>`: Caption for the figure
- Alt text: Descriptive text for screen readers

5. HTML5 Details and Summary (FAQ Section)

```html
<aside aria-labelledby="faq-heading">
  <h2 id="faq-heading">Frequently Asked Questions</h2>

  <details>
    <summary>What is the typical payback period for solar panels?</summary>
    <p>The payback period for solar panels typically ranges from 6 to 12 years, depending on factors such as
your location, energy usage, and available incentives. Our consultants can provide a personalized analysis for
your specific situation.</p>
  </details>

  <details>
    <summary>Do I need to live in a sunny area for solar panels to work?</summary>
    <p>While solar panels are most efficient in sunny areas, they can generate electricity even on cloudy days.
Modern solar technology works in various climates, and our team can assess whether solar is viable for your
location.</p>
  </details>
</aside>
```

Elements demonstrated:
- `<details>`: Disclosure widget for additional information
- `<summary>`: Summary/caption for details element
- Keyboard accessible: Works with Enter/Space keys
- No JavaScript required

6. Contact Form with Native Validation

```html
<form action="#" method="post" aria-labelledby="contact-form-heading">
  <fieldset>
    <legend>Your Information</legend>

    <p>
      <label for="full-name">Full Name: <span aria-label="required">*</span></label>
      <input type="text"
          id="full-name"
          name="full-name"
          required
          minlength="2"
          maxlength="100"
          aria-required="true"
          autocomplete="name"
          placeholder="Enter your full name">
    </p>

    <p>
      <label for="email">Email Address: <span aria-label="required">*</span></label>
      <input type="email"
          id="email"
          name="email"
          required
          aria-required="true"
          autocomplete="email"
          placeholder="your.email@example.com"
          pattern="[a-z0-9._%+-]+@[a-z0-9.-]+\.[a-z]{2,}$">
    </p>

    <p>
      <label for="phone">Phone Number:</label>
      <input type="tel"
          id="phone"
          name="phone"
          autocomplete="tel"
          placeholder="(555) 123-4567"
          pattern="[0-9\-\(\)\s]+"
          minlength="10"
```

```
          maxlength="20">
        <span>(Optional, but recommended for faster response)</span>
      </p>
  </fieldset>


  <fieldset>
    <legend>Inquiry Details</legend>


    <p>
      <label for="message">Message: <span aria-label="required">*</span></label>
      <textarea id="message"
              name="message"
              rows="6"
              cols="50"
              required
              minlength="10"
              maxlength="1000"
              aria-required="true"
              placeholder="Please provide details about your inquiry (minimum 10 characters)"></textarea>
        <span>(Minimum 10 characters)</span>
      </p>
  </fieldset>


  <p>
    <input type="submit" value="Submit Contact Form" aria-label="Submit the contact form">
    <input type="reset" value="Clear Form" aria-label="Clear all form fields">
  </p>
</form>
```


Validation attributes demonstrated:
- `required`: Mandatory fields
- `type="email"`: Email validation
- `type="tel"`: Telephone input
- `pattern`: Regex pattern matching
- `minlength`/`maxlength`: Text length constraints
- `min`/`max`/`step`: Number input constraints
- `autocomplete`: Browser autocomplete support
- `aria-required="true"`: Screen reader indication
- `<fieldset>`/`<legend>`: Grouping related fields

- Explicit `for`/`id` linking: Label association

7. Heading Hierarchy

```html
<h1>Solar Consult</h1>                <!-- Main page title -->

<h2 id="welcome-heading">Welcome to Solar Consult</h2>
<h2 id="services-heading">Our Services</h2>
   <h3 id="solar-benefits-heading">Benefits of Solar Energy</h3>
<h2 id="sidebar-heading">Quick Facts</h2>
```

Structure: H1 → H2 → H3 (logical, meaningful hierarchy)

Summary of Semantic Elements Used

`<header>` - Site header
`<nav>` - Navigation (with ARIA labels)
`<main>` - Main content area (with id for skip-link)
`<section>` - Thematic content grouping
`<article>` - Independent content
`<aside>` - Complementary content
`<footer>` - Footer
`<figure>` - Figure content
`<figcaption>` - Figure caption
`<details>` - Disclosure widget
`<summary>` - Details summary
`<form>` - Form container
`<fieldset>` - Form field grouping
`<legend>` - Fieldset description
`<label>` - Form label (explicitly linked)

Proper heading hierarchy (H1, H2, H3)